

Applicant : Shackleford  
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In the claims:

Please amend claims 1-14 and 16 as indicated below:

1. (Currently Amended) A graphical user interface displaying in a first portion thereof an evolution of a solution for a genetic algorithm that represents potential solutions to complex problems as one or more chromosomes and selects a solution from the potential solutions based on the chromosome that optimally solves the complex problem according to a fitness function, said graphical user interface comprising:

an evolution parameter field in a second portion of said graphical user interface adjustable to assist in identifying the optimal solution to the complex problem represented using the genetic algorithm, said evolution parameter field having a first [position] value, said evolution parameter field comprising at least one variable related to the evolution of said genetic algorithm towards the optimal solution; and

modification [means] interface for modifying the evolution of said solution for said genetic algorithm in real time based upon [a positional] an adjustment of said evolution parameter field from said first [position] value to a second [position] value.

2. (Currently Amended) The graphical user interface according to claim 1, wherein the modification interface used for the adjustment of said evolution parameter field is a slider.

3. (Currently Amended) The graphical user interface according to claim 1, wherein said modification interface to said evolution parameter field is manipulated by a mouse, joystick, knob, or touchpad.

4. (Currently Amended) The graphical user interface according to claim 1, wherein said variable related to the evolution of said genetic algorithm is a number of evaluations performed in said genetic algorithm during a run.

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5. (Currently Amended) The graphical user interface according to claim 1, wherein said variable related to the evolution of said genetic algorithm is a probability of any bit in a chromosome representing a potential solution of being a cutpoint [in said genetic algorithm].
6. (Currently Amended) The graphical user interface according to claim 1, wherein said variable related to the evolution of said genetic algorithm is a probability of any bit in a chromosome representing a potential solution of being mutated during a run of [[in]] said genetic algorithm.
7. (Currently Amended) The graphical user interface according to claim 1, wherein said modification [means] interface comprises a direct manipulation of said genetic algorithm as indicated by the [positional] adjustment of said evolution parameter field, said direct manipulation being accomplished by overwriting [[a]] the at least one variable related to the evolution of [used in] said genetic algorithm.
8. (Currently Amended) A computer implemented method for dynamically modifying an evolution of a solution for a genetic algorithm that represents potential solutions to complex problems as one or more chromosomes and selects a solution from the potential solutions based on the chromosome that optimally solves the complex problem according to a fitness function, said method comprising [steps of]:
- adjusting an evolution parameter field within a graphical user interface of a computer system from a first value [position] to a second value [position], resulting in [[a]] an [positional] adjustment, said evolution parameter field comprising at least one variable related to the evolution of said genetic algorithm;
  - updating the evolution of said solution for said genetic algorithm in real time based upon said [positional adjustment in said step of ] adjusting; and
  - displaying the update of said solution for said genetic algorithm within the graphical user interface.

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9. (Currently Amended) The method according to claim 8, wherein in said [step of] adjusting, said evolution parameter field is adjusted from said first value [position] to said second value [position] by a user.

10. (Currently Amended) The method according to claim 8, wherein said [step of] updating further comprises a direct manipulation of said genetic algorithm as indicated by the [positional] adjustment of said evolution parameter field, said direct manipulation being accomplished by overwriting a variable used in said genetic algorithm.

11. (Currently Amended) The method according to claim 10, wherein said variable used in said genetic algorithm is a number of evaluations performed each run in said genetic algorithm.

12. (Currently Amended) The method according to claim 10, wherein said variable used in said genetic algorithm is a probability of any bit in a chromosome representing a potential solution of [any solution] being a cutpoint [in said genetic algorithm].

13. (Currently Amended) The method according to claim 10, wherein said variable used in said genetic algorithm is a probability of any bit in a chromosome representing a potential solution of [any solution] being mutated during a run of [[in]] said genetic algorithm.

14. (Currently Amended) A machine readable memory for storing computer code to act as a graphical user interface to a genetic algorithm that represents potential solutions to complex problems as one or more chromosomes and selects a solution from the potential solutions based on the chromosome that optimally solves the complex problem according to a fitness function, said memory comprising:

a first code section stored in memory for receiving an adjustment of an evolution parameter field within said graphical user interface from a first value [position] to a second value [position], resulting in an [a positional] adjustment, said evolution parameter field comprising at least one variable related to the evolution of said genetic algorithm towards the optimal solution;

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a second code section stored in memory for a modification interface that modifies [updating] the evolution of said solution for said genetic algorithm in real time based upon [said positional] an adjustment of said evolution parameter field from a first value to a second value [in said step of adjusting]; and

a third code section stored in memory for displaying the modification [update] of the evolution of said solution for said genetic algorithm within the graphical user interface.

15. (Original) The machine readable memory according to claim 14, wherein said memory exists on a server.

16. (Currently Amended) The machine readable memory according to claim 14, wherein said memory is used on a server providing [exists on] a website on the Internet.